Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Fostering Innovation and Investment in the Wireless Communications Market	)	GN Docket No. 09-157
	)	
	)	
A National Broadband Plan For Our Future	)	GN Docket No. 09-51

REPLY COMMENTS

The WCS Coalition,[1] by its attorneys, hereby submits its reply to the comments filed by Sirius XM Radio Inc. ("Sirius XM") in response to the Commission's *Notice of Inquiry*.[2]

The WCS Coalition and Sirius XM rarely agree on much, but the WCS Coalition wholeheartedly agrees with Sirius XM that "[t]he Commission should resolve the WCS and satellite radio compatibility issues on the record developed in [WT Docket No. 07-293 and IB Docket No. 95-91] and not as part of any other proceeding . . .."[3] As Sirius XM correctly notes, "[t]he parties have filed reams of technical data supporting their positions . . . and recently conducted demonstrations and field tests in Ashburn, Virginia in the presence of FCC engineers and staff, to show the real-world effect of WCS interference to satellite radio reception."[4] Unfortunately, despite Sirius XM's

[1] The WCS Coalition is comprised of the licensees of virtually all of the 2.3 GHz band Wireless Communications Service ("WCS") spectrum licensed in the United States.

[2] *See* Fostering Innovation and Investment in the Wireless Communications Market, GN Docket No. 09-157, *Notice of Inquiry*, 24 FCC Rcd 11322 (2009) ("*Innovation NOI"*). The Commission has extended the deadline for submitting reply comments regarding the *Innovation NOI* until November 5, 2009. Twenty-One Day Extension Of Time To File Reply Comments On Wireless Innovation And Investment Notice Of Inquiry, *Public Notice*, DA 09-2206 (rel. Oct. 9, 2009).

[3] Comments of Sirius XM Radio Inc., GN Docket No. 09-157, at 4 (filed Sept. 30, 2009) ["Sirius XM Comments"].

[4] *Id.*

acknowledgement that this is neither the time nor the place to resolve IB Docket No. 95-91 and WT Docket No. 07-293, its comments mischaracterize the issues before the Commission in those proceedings and are a transparent attempt to skew the Commission's analysis of the merits.

The WCS Coalition certainly has no quarrel with the proposition that innovation and investment are promoted by providing licensees with certainty regarding their interference protection rights.[5] However, Sirius XM's comments continue a disturbing trend – as Sirius XM and its predecessors have done in a variety of other proceedings involving Digital Audio Radio Service ("DARS") coexistence with other spectrum uses,[6] Sirius XM claims interference protection far beyond that to which it is entitled. Reading the Sirius XM comments, one would think that the Commission had created the Wireless Communications Service ("WCS") as a secondary service, consigned to accept whatever interference DARS throws its way while obligated to make whatever sacrifices are necessary to assure that no DARS subscriber ever suffers even unperceivable interference.[7] Yet, facts simply do not support that revisionist history.[8]

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[5] *See* Sirius XM Comments at 5.

[6] For example, the Commission has rejected a proposal by Sirius XM's predecessors that all new aeronautical mobile operators in the 2360-2395 MHz band meet more stringent out-of-band emission ("OOBE") limits into the DARS band than currently apply. *See* Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Systems, *Seventh Report and Order*, 19 FCC Rcd 21350, 21374 (2004). Similarly, when Sirius XM's predecessors sought to impose significant new OOBE limits on WiFi and other unlicensed 2.4 GHz band uses, the Commission has twice rejected the proposal. *See* Amendment of Part 15 of the Commission's Rules Regarding Spread Spectrum Devices, *Second Report and Order*, 17 FCC Rcd 10755, 10766-67 (2002); Modification of Parts 2 and 15 of the Commission's Rules for Unlicensed Devices and Equipment Approval, *Report and Order*, 19 FCC Rcd 13539, 13548 (2004).

[7] *See* Sirius XM Comments at 7-8.

[8] Nor do the facts support Sirius XM's strange assertion that its predecessors relied on the existing WCS rules when they "placed the terrestrial frequencies furthest from the WCS band." *Id.* In fact, the terrestrial repeaters for the two DARS systems are placed in the center of each of the two license blocks, not at the end furthest from the WCS band. Letter from Robert L. Pettit, Counsel to Sirius XM Raidio, Inc., to

Sirius XM conveniently ignores that the Commission has spoken with crystalline clarity on the relationship between DARS and WCS. The Commission has left no ambiguity that any desire for a high quality DARS must "be balanced with the need to provide reasonable operating parameters for adjacent services" and thus the Commission's objective in governing WCS must be "to limit the potential for interference to a reasonable level -- not to provide a pure, interference-free environment."[9] Not surprisingly, then, the pending *Notice of Proposed Rulemaking* in WT Docket No. 07-293 makes clear that the Commission's objective in that proceeding is to craft rules "that would allow SDARS terrestrial repeaters and WCS operation to coexist in adjacent bands."[10]

And that objective is precisely what adoption of the proposals being advanced by the WCS Coalition would achieve.[11] Sirius XM has a right to expect reasonable interference protection from WCS, not absolute protection, and the record before the Commission in WT Docket No. 07-293 demonstrates that this expectation will be honored by adoption of the WCS Coalition's proposal for modifying the Part 27 WCS rules.

Marlene H. Dortch, Secretary, Federal Communications Commission, IB Docket No. 95-91, Attachment at 8 (filed Aug. 11, 2009).

[9] Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service ("WCS"), *Memorandum Opinion and Order*, 12 FCC Rcd 3977, 3991 (1997) ["*WCS Reconsideration Order*"] (emphasis added).

[10] Amendment of Part 27 of the Commission's Rules to Govern the Operation of Wireless Communications Services in the 2.3 GHz Band; Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band, *Notice of Proposed Rulemaking and Second Further Notice of Proposed Rulemaking*, 22 FCC Rcd 22123, 22146 (2007). *See also id.* at 22124.

[11] *See* Letter from Mary N. O'Connor, Counsel to the WCS Coalition, to Marlene H. Dortch, Secretary, Federal Communications Commission, IB Docket No. 95-91 (filed Aug. 4, 2009) ["WCS Coalition Letter"] Given the theoretical analysis and field data that has been placed in the record, Sirius XM defies credulity when it proclaims (albeit without citation to any facts) that it "would be devastated by FCC rule changes relating technical restrictions on adjacent band operations." Sirius XM Comments at 9.

Sirius XM's comments regarding the benefits of regulatory certainty are ironic, for the WCS industry is proof of the importance of regulatory certainty as a spur to wireless innovation and investment. There is no denying that, despite the best efforts of WCS licensees to explore a variety of business plans, deployment in the band has been slow. But, as the Commission knows, that can be traced to ongoing uncertainty as to the power levels at which DARS terrestrial repeaters will be permitted to operate and the interference they will be permitted to cause to WCS.

When the Commission adopted service rules for DARS in 1997 just prior to the WCS auction, it acknowledged that "some satellite DARS applicants intend to implement, as necessary, terrestrial repeaters, or 'gap-fillers', in urban canyons and other areas where it may be difficult to receive DARS signals transmitted by a satellite."[12] The Commission, however, concluded that it lacked sufficient information to craft technical rules governing such repeaters and issued a *Further Notice of Proposed Rulemaking* in IB Docket No. 95-91 soliciting information on a variety of issues associated with the deployment of such "gap fillers."[13]

It was not until long after the auction of WCS spectrum had closed that the DARS licensees first advised the Commission that they intended to abandon the use of low-powered "gap fillers" for high-power transmitters that would blanket metropolitan

[12] Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band, *Report and Order, Memorandum Opinion and Order, and Further Notice of Proposed Rulemaking*, 12 FCC Rcd 5754, 5810-12 (1997) ["*DARS Order and FNPRM*"]. *See also* Satellite CD Radio, Inc., *Order and Authorization*, 13 FCC Rcd 7971, 7987 n.103 (IB 1997) ("Terrestrial repeaters may be necessary to implement ('gap-fillers') in urban canyons and other areas where it may be difficult to receive SDARS signals transmitted by a satellite.").

[13] *See DARS Order and FNPRM*, 12 FCC Rcd at 5810.

areas.[14] Hard on the heels for that disclosure, the DARS licensees also revealed that they actually had constructed extensive networks of such repeaters under experimental authorizations, and sought special temporary authorizations ("STAs") to place those "experimental" networks into commercial operation. Suffice it to say that while the Commission ultimately granted the STA applications, it specifically acknowledged in response to the WCS industry's concerns that "there are areas around terrestrial repeaters where [WCS] equipment may be susceptible to blanketing interference,"[15] and mandated that DARS cure any interference caused in the future to WCS facilities.[16]

Almost from the day the ink on the STAs dried, DARS has sought to have these high-powered terrestrial repeaters grandfathered under the permanent rules. However, DARS has fought tooth and nail against continuing its current obligation to cure any interference, notwithstanding that this obligation was the *quid pro quo* for allowing it to operate high-powered repeaters pursuant to STA in the first place. And therein lies the problem that has bedeviled WCS – a dozen years after first receiving their licenses, WCS

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[14] *See* Supplemental Comments of XM Radio Inc., IB Docket No. 95-91 (filed Dec. 17, 1999); Supplemental Comments of Sirius Satellite Radio, IB Docket No. 95-91 (filed Jan. 18, 2000). As WCS licensees have noted, however, much of the precise technical information contained in the initial filings by XM and Sirius has changed over the years, presenting the WCS community and the Commission with a "moving target" that has slowed Commission resolution of the issues. *See, e.g.*, Letter from Douglas I. Brandon, VP External Affairs and Law, AT&T Wireless Services, Inc. *et al*., to Magalie Roman Salas, Secretary, Federal Communications Commission, IB Docket No. 95-91, at 2 (filed July 27, 2001) ("[T]he information finally revealed in the STA request is radically different from the most recent prior data provided by XM to the Commission and the WCS licensees at a meeting on January 11, 2001 []. At that time, XM represented that its nationwide network would make use of 150 high-power repeaters and that only three cities would have more than three such repeaters. In stark contrast, its recent STA request encompasses *more than five times as many high-power repeaters and 50 cities with more than three such repeaters*. Needless to say, these discrepancies have forced the WCS licensees to reexamine some of their analyses of SDARS terrestrial repeater deployment and its potential impact on WCS services. It has also led them to wonder what surprises may be in store when the other SDARS licensee, Sirius Satellite Radio, finally discloses the characteristics of the terrestrial repeater network it has been deploying under its own experimental authorization.") (emphasis in original).

[15] Sirius Satellite Radio, Inc., *Order and Authorization*, 16 FCC Rcd 16773, 16777 (IB 2001) ["*Initial Sirius STA Order*"]; XM Radio Inc., *Order and Authorization*, 16 FCC Rcd 16781, 16785 (IB 2001) ["*Initial XM STA Order*"].

[16] *See Initial Sirius STA Order*, 16 FCC Rcd at 16779; *Initial XM STA Order*, 16 FCC Rcd at 16787.

licensees still do not know the extent to which they will be subjected to interference from DARS terrestrial repeaters. Until this issue and that involving the WCS OOBE limits are resolved, implementation of the ubiquitous wireless mobile broadband networks that represent the highest and best use of the band will remain impossible. The *Innovation NOI* is right -- protracted rule making proceedings "can create uncertainty and discourage investment."[17]

The suggestion by Sirius XM that retention of the existing, unnecessarily restrictive WCS OOBE limits can be squared with the Commission's goal of promoting innovation is absurd.[18] The record developed in the Commission's *National Broadband Plan* proceeding leaves no doubt that Americans have embraced the potential of mobile broadband to provide Internet access when and where they want it. As the staff presentation at the Commission's September open meeting reported, consumers are subscribing to mobile broadband services in unprecedented number,[19] data traffic is exploding,[20] and the resulting strain on network capacity ultimately will require the Commission to free perhaps as much as 1 GHz in spectrum for mobile broadband use.[21] Chairman Genachowski has made clear that his goal is to "foster[] innovation and

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[17] *Innovation NOI*, 24 FCC Rcd at 11332.

[18] *See* Sirius XM Comments at 3.

[19] Federal Communications Commission, Commission Open Meeting Presentation on the Status of the Commission's Processes for Development of a National Broadband Plan, at 68 (Sept. 29, 2009) (reporting on prediction by Forrester Research that number of data subscribers will increase from 67 million in 2008 to 139 million in 2013); *id.* at 67 ("Smartphone sales to overtake standard phones by 2011").

[20] *See id.* at 66 (reporting that data usage will increase from 17 petabytes per month this year to 397 petabytes per month in 2013); *id* at 68 (reporting on Yankee Group projection that relative to 2009 data usage will grow almost thirty-fold by 2015).

[21] *See id.* at 63 ("Some models suggest a need for more than 1 GHz of total allocated spectrum"). *See also* Letter from Christopher Guttman-McCabe, Vice President, Regulatory Affairs, CTIA-The Wireless Association, to Chairman Julius Genachowski, *et al*., Federal Communications Commission, GN Docket No. 09-51 (filed Sept. 29, 2009) (suggesting need for allocation of additional 800 MHz for mobile broadband services).

investment" through mobile broadband.[22] Yet, the Chairman has correctly noted that America is facing a "looming spectrum crisis" that jeopardizes its ability to remain a world leader in innovation.[23]

Almost one year ago, a draft report and order resolving IB Docket No. 95-91 and WT Docket No. 07-293 began circulating among the Commissioners for adoption.[24] Although the item was scheduled for adoption at the Commission's December 2008 open meeting,[25] it was subsequently placed on the proverbial back burner amid concerns that the then-impending DTV transition should be the Commission's sole focus. With the DTV transition largely completed, and the Commission's focus turned to America's broadband needs, it is now time to refocus on these proceedings and promptly resolve them.[26]

In conclusion, innovation comes from a regulatory environment that provides licensees with sufficient flexibility to meet public demand, and with sufficient certainty that they know their reasonable expectations will not be dashed by regulatory fiat. The *NOI* recognizes that "long delays in the establishment of service rules or the imposition

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[22] Julius Genachowski, Chairman, Federal Communications Commission, America's Mobile Broadband Future, Remarks at International CTIA Wireless I.T. & Entertainment, at 2 (Oct. 7, 2009).

[23] *Id.* at 4.

[24] Federal Communications Commission, FCC Items on Circulation, http://www.fcc.gov/fcc-bin/circ_items.cgi (last visited Nov. 4, 2009).

[25] *FCC Announces Tentative Agenda for December 18 Open Meeting*, News Release, at 2 (rel. Dec. 8, 2008).

[26] Indeed, during the months in which these proceedings were in limbo, the record in support of the OOBE relief the WCS Coalition seeks has only become more compelling. In late July, the WCS Coalition conducted an open and transparent field demonstration of WCS mobile broadband technology in Ashburn, VA. The results of that demonstration, which was viewed by several members of the Commission's staff and which was open to the public, established beyond peradventure that adoption of the WCS Coalition's compromise OOBE proposal will not result in undue interference to DARS reception. *See* WCS Coalition Letter. Thus, whatever doubts may have existed before as to the wisdom of the WCS Coalition's proposed solution should now be assuaged.

of onerous and perhaps unachievable technical standards"[27] can have an adverse impact on innovation, and asks how the Commission can eliminate these sorts of barriers to deployment.[28] Resolution of WT Docket No. 07-293 and IB Docket No. 95-91 would be a good start.

Respectfully submitted,

THE WCS COALITION

By: /s/ Paul J. Sinderbrand
Paul J. Sinderbrand
Mary N. O'Connor

Wilkinson Barker Knauer, LLP
2300 N Street, NW
Suite 700
Washington, DC 20037
202.783.4141

Its Attorneys

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[27] *Innovation NOI*, 24 FCC Rcd 11332.

[28] *Id.* at 11326.